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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER

LOPEZ, CARLOS N

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 11/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/007,724

Applicant(s)

BEREMAN, ROBERT D.

Examiner

Carlos Lopez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25,28-34,36,38,39,41,43 and 45-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24,25 and 28-31 is/are allowed.
- 6) ☒ Claim(s) 1-23,32-34,36,38,39,41,43,45-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1) Claims 32-34, and 36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It is noted that claim 32's smoking composition comprises smokable material. The originally filed specification does not provide support for a comparison of the smoke produced by the smokable material versus the smoke produced by the smoking composition.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "the tobacco" lacks antecedent basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2) Claims 1-13, 17, 32-34,36, 38-39, 41,43,45-48 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dale et al (US 4,317,460). Dale discloses adding a metal catalyst to a cigarette (Column 1, lines 4 and 37-44). The metal catalysts are in particle form having a size below 50 microns (Column 6, line 58ff) with a micro-porous support (Column 3, lines 63ff). The micro-porous support has a pore diameter below 30Å(3nm) wherein the metal catalyst is deposited predominantly within the pores. Thus it is clear that the metal catalyst would have a particle size below 3nm in order to be deposited within the pores of the micro-porous support. The catalytic material is a transition metal such as palladium (Column 5, line 33) in combination with a nitrate salt source (Column 5, line 44). It is noted that claim 1 is a product by process claim. While the claimed product may be produced by a different method than recited by applicant's claims, it is deemed

that the end product is not structurally distinguishable from that of Dale et al. Hence, Dale anticipates the claimed invention or in the event any differences can be shown for the product of the product-by-process claims, as opposed to the product taught by Dale et al, such differences would have been obvious to one of ordinary skill in the art as routine modification of the product in the absence of showing of unexpected results; see also *In re Thorpe*, 227 USPQ 964 (CAFC 1985).

As for claim 3, reduced nicotine tobacco in cigarettes is known as "mild cigarettes" in the art

As for claim 2, a cigarette comprises tobacco.

As for claim 4, 43,45, and 46-48 in view of the fact that the smoking composition would have the claimed metal catalytic particles and a nitrate source, a reduction of tobacco-specific nitrosamines and PAH would be expected.

Claim 13, is a product by process and thus palladium that is derived or acquired through the derivation of ammonium tetrachloropalladate would result in the same end product, a smoking composition having palladium. Thus, no difference is seen between the composition of Dale et al and claim 13.

As for claim 24 since the nitrate source is part of the catalyst system, the nitrate is added simultaneously with the application of the metal catalyst.

As for claim 32 and 38, cigarettes having the catalyst system are combusted in order for the cigarette to be smoked. Additionally, the method by which the smoking composition is made does not change the method by which a cigarette is smoked as recited in claims 32 and 38.

3) Claims 1-21 and 32-34,36,38-39,41,43, and 45-50 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bryant, Jr. et al (US 4,235,251). Bryant discloses adding a palladium metal catalyst to tobacco that is subsequently formed into a cigarette (Column 3, lines 13-17). The metal catalysts are in particle form having a size below 50 microns (Column 3, lines 13-17). The palladium being added to the tobacco at .01 to about .1% by weight (Column 3, lines 13-17) and is in combination with a nitrate salt source such as $\text{Mg}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$ (Column 3, line 46) at a concentration below .8% (Column 4 line 8). Bryant also teaches that palladium may be used in a soluble or insoluble form wherein soluble palladium is defined as the filtrate passing through a filter membrane having a pore diameter of .45 μm (Column 4, line 54). Thus the palladium particles would inherently have a size smaller than .45 μm . It is noted that claim 1 is a product by process claim. While the claimed product may be produced by a different method than recited by applicant's claims, it is deemed that the end product is not structurally distinguishable from that of Bryant et al. Hence, Bryant anticipates the claimed invention or in the event any differences can be shown for the product of the product-by-process claims, as opposed to the product taught by Dale et al, such differences would have been obvious to one of ordinary skill in the art as routine modification of the product in the absence of showing of unexpected results; see also *In re Thorpe*, 227 USPQ 964 (CAFC 1985). As for claim 12, the term about 200nm would include particles smaller than .45 μm (450nm).

As for claim 3, reduced nicotine tobacco in cigarettes is known as "mild cigarettes" in the art.

Claim 13 is a product by process and thus palladium that is derived or acquired through the derivation of ammonium tetrachloropalladate would result in the same end product, a smoking composition having palladium. Thus, no difference is seen between the composition of Bryant et al and claim 13.

As for claim 4, 36, 43, and 45-48, in view of the fact that the smoking composition would have the claimed metal catalytic particles and a nitrate source, a reduction of tobacco-specific nitrosamines and PAH would be expected.

As for claim 49-50, as noted above nitrate salt source such as $\text{Mg}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$ (Column 3, line 46) has a concentration below .8% (Column 4 line 8).

4) Claims 1-21, 32-34, 36, 38-39, 41, 43, and 45-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norman et al (US 4,216,784) in view of Dale et al (US 4,216,784). Norman discloses adding a palladium metal catalyst to tobacco that would be formed into a cigarette (Column 3, lines 5-17). The palladium being added to the tobacco at .001 to about 1% by weight (Column 4, lines 1) and is in combination with a nitrate salt source such as $\text{Mg}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$ (Column 4, line 30-35) at a concentration below .8% (Column 5 line 30). The metal catalysts are in particle form having a size below 100 U.S Mesh (Column 5, lines 60). Norman is silent disclosing a particle size less than 20microns. However, as taught by Dale, a metal catalyst such as palladium deposited predominantly within the pores of a micro-porous support having a pore diameter below 30\AA (3nm) results in an increase activity of the catalyst (Column 4,

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lines 11-16). Therefore palladium particles should be less than 3nm in order to be deposited within the pores of the catalyst support and thus take advantage of an increase in activity by of the palladium catalyst. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have used Norman's palladium particles at a size of 3nm to allow it to be placed within the pores of a support in order to have an increased activity of the palladium catalyst as taught by Dale.

As for claim 3, reduced nicotine tobacco in cigarettes is known as "mild cigarettes" in the art.

As for claim 4, 36, 43, and 45-48, in view that the smoking composition would have the claimed metal catalytic particles and a nitrate source, a reduction of tobacco-specific nitrosamines and PAH would be expected.

5) Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bryant, Jr. et al (US 4,235,251) in view of Neukomm (US 4,201,234). Bryant is silent disclosing the type of cigarette filter used in the cigarette. However as taught by Neukomm, providing a cavity filter filled with activated carbon to a triple cigarette filter highly improves filtering capacity (Column 1, line 5ff and Column 2 line 1ff). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to used a triple cigarette filter as taught by Neukomm with Bryant's cigarette in order to increase filtering capacity that would enhance filtering of the mainstream smoke.

Allowable Subject Matter

Claims 24-25, and 28-31 are allowed.

Response to Arguments

Applicant's arguments filed 8/27/03 have been fully considered but they are not persuasive. Applicant argues that the smoking composition is distinguished over Dale, Bryant, and Norman because they fail to disclose the method by which the smoking composition is made. As noted above, claim 1 is being treated a product-by-process claims and thus the patentability is based on the product itself (See MPEP 2113). "If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (See also MPEP 2113).

Additionally, applicant argues against the Bryant et al in view of Neukomm by attacking the Neukomm reference individually. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Claims 32 and 38 are drawn to a method of smoking a smoking composition and a method of smoking a cigarette respectively. The fact that applicant's smoking composition is made by a different method does not distinguish the claimed subject matter of claims 32 and 38. Applicant argues that since claims 32 and 38 are method claims, then the process limitation for making the smoking composition also carries patentable weight. However, claims 32 and 38 have been treated as a method of using a product, wherein the process of making the product, the claimed smoking composition, does not provide structural distinction over the prior art (See MPEP 2113).

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lopez whose telephone number is (703) 605-1174 and after Dec. 18 2003 calls should be directed to (571) 272-1193. The examiner can normally be reached on Mon.-Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (703) 308-1164 and after Dec. 18 2003 calls should be directed to (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

C.L
November 17, 2003


STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700